The University of Texas at Tyler **2021-2022**

COLLEGE OF ARTS AND SCIENCES

Bachelor of Science in Biochemistry

The Department of Chemistry & Biochemistry offers students an opportunity to acquire a solid fundamental understanding of chemical principles, to acquire basic laboratory skills, to develop skills in oral and written communication and the use of the chemical literature, to gain an appreciation of chemistry, to develop critical thinking and logical reasoning, to use the scientific method, and to develop an ability to learn and work independently that will prepare them for advanced studies and successful careers in industry, medical professions, forensics, government, and education.

Recommended 4-Year Curriculum – B.S. in Biochemistry[1]

FRESHMAN YEAR

First Semester			Credit Hours
CHEM	1311	General Chemistry I	3
CHEM	1111	General Chemistry I Lab	1
BIOL	1306	General Biology I	3
BIOL	1106	General Biology I Lab	1
MATH	2413	Calculus I	4
ENGL	1301	Grammar & Composition I	3
		Total Semester Hours	**15**

Second Semester			Credit Hours
CHEM	1312	General Chemistry II	3
CHEM	1112	General Chemistry II Lab	1
BIOL	1307	General Biology II	3
BIOL	1107	General Biology II Lab	1
MATH	2414	Calculus II	4
ENGL	1302	Grammar & Composition II	3
		Total Semester Hours	**15**

SOPHOMORE YEAR

First Semester			Credit Hours
CHEM	3342	Organic Chemistry I	3
CHEM	3143	Organic Chemistry I Lab	1
CHEM	3310	Analytical Chemistry	3
CHEM	3111	Analytical Chemistry Lab	1
PSYC	1301	Intro to Psychology	3
PHYS	1301/2325	College or University Physics I	3
PHYS	1101/2125	College or University Physics I Lab	1
		Total Semester Hours	**15**

Second Semester			Credit Hours
CHEM	3344	Organic Chemistry II	3
CHEM	3145	Organic Chemistry II Lab	1
SOC	1301	Intro to Sociology	3
MATH	1342	Statistics	3
PHYS	2326	College or University Physics II	3
PHYS	2126	College or Univ. Physics II Lab	1
_____	_____	Visual and Performing Arts[2]	3
		Total Semester Hours	**17**

JUNIOR YEAR

First Semester			Credit Hours
CHEM	4334	Biochemistry I	3
CHEM	4135	Biochemistry Lab	1
_____	_____	Advanced Biology Elective*	3
_____	_____	Advanced Biology Elective Lab*	1
POLS	2306	Intro. to Texas Politics	3
HIST	1301	US History I	3
		Total Semester Hours	**14**

Second Semester			Credit Hours
CHEM	4346	Biochemistry II*	3
CHEM	3320	Inorganic Chemistry	3
CHEM	3121	Inorganic Chemistry Lab	1
_____	_____	Advanced Biology Elective*	3
_____	_____	Advanced Biology Elective Lab*	1
HIST	1302	US History II	3
		Total Semester Hours	**14**

SENIOR YEAR

First Semester			Credit Hours
CHEM	3352	Physical Chemistry I	3
CHEM	3153	Physical Chemistry I Lab	1
_____	_____	Advanced Biology Elective*	3
_____	_____	Advanced Biology Elective Lab*	1
CHEM	4340	Proteomics	3
CHEM	4190	Chemical Literature	1
POLS	2305	American Government	3
		Total Semester Hours	**15**

Second Semester			Credit Hours
CHEM	4344	Molecular Basis of Disease	3
CHEM	3346	Nano/Supra Chemistry	3
_____	_____	Advanced Chemistry Elective**	3
CHEM	4191	Seminar	1
_____	_____	World or European Literature[3]	3
_____	_____	Approved Electives[4]	2
		Total Semester Hours	**15**

Total hours must equal at least 120 hours, including 44 upper-division hours

NOTES:

[1] Consult with your advisor for additional information on degree requirements and schedule planning.

[2] Visual and Performing Arts (ART 1301, 2303, 2304; MUSI 1306, 2301; THTR 1301, 1356).

[3] World or European Literature (ENGL 2322, 2323, 2362 or 2363).

[4] Approved Advanced Electives should be selected in consultation with your advisor to assure all hour requirements are met (44 upper division, 120 total hours).

**** 12 Hours of Advanced Biology Electives selected from:***	***BIOL 3332/3133 Genetics (CHEM 1312/1112)***
	BIOL 3343/3144 Physiology (CHEM 3342/3143)
	BIOL 4350 Immunology (BIOL 3332)
	BIOL 3334/3134 Cell Biology (CHEM 3342/3143)
	BIOL 4300/4101 Microbiology (CHEM 3344/3145)
*****Advanced Chemistry Electives selected from:***	***CHEM 3354/3155 Physical Chemistry II (Spring)***
	CHEM 4330 Advanced Inorganic Chemistry (Fall)
	CHEM 4332 Spectroscopy (Spring)
	CHEM 4312/4113 Instrumental Analysis (Spring)

The Department of Chemistry has a chemistry program approved by the American Chemical Society (ACS). Students who receive a Bachelor of Science degree in chemistry and complete the ACS-approved curriculum will graduate as ACS-certified chemists.

This is only a recommended outline. Because degree requirements do change, you should consult an advisor as well as the University Catalog, which is the only official document regarding baccalaureate degree requirements.